

Sermatech International, Inc.)	Departmental
York County)	Findings of Fact and Order
Biddeford, Maine)	Air Emission License
A-643-71-G-R)	

After review of the air emissions license renewal application, staff investigation reports and other documents in the applicant's file in the Bureau of Air Quality, pursuant to 38 M.R.S.A., Section 344 and Section 590, the Department finds the following facts:

I. REGISTRATION

A. Introduction

Sermatech International, Inc. (SI) of Biddeford, Maine has applied to renew their air emission license permitting the operation of emission sources associated with their coatings facility.

B. Emission Equipment

SI is authorized to operate the following air emission units:

Fuel Burning Equipment

Equipment	Maximum Capacity (MMBtu/hr)	Fuel Type	Maximum Firing Rate (scf/hr)	Stack
Furnace #3	2.0	Nat. Gas	1942	15
Furnace #4	2.0	Nat. Gas	1942	15
Furnace #5	2.0	Nat. Gas	1942	19
Furnace #6	1.4	Nat. Gas	1352	19
Furnace #7	2.6	Nat. Gas	2524	9
Boiler #8	1.3	Nat. Gas	1263	5
Furnace #9	2.0	Nat. Gas	1942	8
Air Make-up Unit	3.0	Nat. Gas	3120	ambient
Furnace #11	1.0	Nat. Gas	1040	11
Furnace #15	1.98	Nat. Gas	1922	10
Furnace #16	1.98	Nat. Gas	1922	7
Furnace #17	1.98	Nat. Gas	1922	6
Furnace #18	2.0	Nat. Gas	1942	29
Furnace #19	2.0	Nat. Gas	1942	30

In addition to the units listed above SI owns and operates several gas fired furnaces that have a maximum heat input capacity of less than 1 MMBtu/hour.

Process Equipment

Unit	Control Equipment
Sermatel Booth	Dry Filter Media
Organic Booth	Dry Filter Media
Pack Station #1	Dry Filter Media/HEPA
Pack Station #2	Dry Filter Media/HEPA
Low Temp Station	Dry Filter Media/HEPA
Plasma Booth 1	Dry Filter Media/HEPA
Plasma Booth 1A	Dry Filter Media/HEPA
Plasma Booth 2	Dry Filter Media/HEPA
Plasma Booth 3	Dry Filter Media/HEPA
MEK Parts Washer	Fugitive
Work Station	Dry Filter Media/HEPA

C. Application Classification

The application for SI does not include the licensing of increased emissions or the installation of new or modified equipment, therefore the license is considered to be a renewal of current licensed emission units only.

II. BEST PRACTICAL TREATMENT (BPT)

A. Introduction

In order to receive a license the applicant must control emissions from each unit to a level considered by the Department to represent best practical treatment (BPT), as defined in Chapter 100 of the Air Regulations. Separate control requirement categories exist for new and existing equipment as well as for those sources located in designated non-attainment areas.

BPT for existing emissions equipment means that method which controls or reduces emissions to the lowest possible level considering:

- the existing state of technology;
- the effectiveness of available alternatives for reducing emissions from the source being considered; and
- the economic feasibility for the type of establishment involved.

B. Natural Gas Units

The 14 natural gas firing units are each smaller than 10 MMBtu/hr and are not subject to the requirements of EPA New Source Performance Standard (NSPS) 40 CFR Part 60, Subpart Dc for boilers between 10 and 100 MMBtu/hr.

BPT for the natural gas firing unit is the following:

- Use of natural gas.
- Emission rates for PM are based on BPT of 0.05 lb/MMBtu.
- SO₂, NO_x, CO and VOC emission rates are based on AP-42 data dated 10/96 for natural gas fired boilers smaller than 100 MMBtu/hr.
- Visible emissions from each of the stacks serving the natural gas units shall not exceed 10% opacity on a six (6) minute block average basis, except for no more than one (1) six (6) minute block average in a 3-hour period.

C. Process Areas

1. Diffusion Area

The Diffusion Area operates a coating line consisting of a packed powder coating process and diffusion of the coatings into the base alloy in high temperature furnaces. Emissions from this area include PM HAP. BPT for PM is the use of Dry Filter Media and HEPA filters.

2. SermeTel Area

The SermeTel Area applies protective proprietary coatings to components using high volume, low pressure (HVLP) spray guns in spray booths. Emissions from this area include PM, VOC and HAP. BPT is the use of HVLP spray guns and poly filters.

3. Thermal Spray Area (plasma)

The Thermal Spray Area applies a variety of powder coatings through energy created by a plasma arc. BPT for PM is the use of Dry Filter Media and HEPA filters.

4. Sermalcote Mixing Area

The Sermalcote Mixing Area applies a slurry coating to components by pouring the coating on the part, both inside and out. Emissions from this area include PM HAP. BPT for PM is the use of Dry Filter Media and HEPA filters.

5. Masking Area

The Masking Area is a preparatory process for all of the coating applications. The maskants are prepared using a variety of materials, including adhesives, diluents and nickel powder to protect areas of a part that are not to be coated.

D. Facility Wide HAP emissions

The following is a list of the VOC HAPs used in the process at this time:

Methyl Ethyl Ketone
Toluene
Xylene

BPT for VOC HAP emissions is:

- A facility wide limit of 1.0 ton per year of any one single VOC HAP (12 month rolling total)
- A facility wide limit 2.0 tons per year of total VOC HAPs (12 month rolling total)
- Use of HVLP spray guns in the SermeTel Area.
- Closing the MEK Parts Washer lid when not in use.

The following is a list of the PM HAPs used in the process at this time:

Antimony
Cadmium Sulfoselenide
Chromium III
Chromium VI (water soluble)
Chromium Oxide
Chromium
Copper Chromite Spinel
Iron Chromite Spinel
Nickel
Strontium Chroma 2-Ethoxyethyl Acetate
Strontium Chromate
Zinc Iron Chromate Spinel

BPT for PM HAP emissions is:

- A facility wide limit of 9.9 tons per year of any one single PM HAP (12 month rolling total)
- A facility wide limit 12.0 tons per year of total PM HAPs (12 month rolling total)
- Use of Dry filter Media and a combination of Dry Filter Media followed by HEPA filters.

The facility wide ton per year limits are in place to keep SI a minor source for HAPs. The record keeping documenting the above limits for HAPs shall be based on MSDS or manufacturer information for the materials and controls used in conjunction with usage and hours of operation, if necessary.

E. Facility Emissions and Fuel Use Caps

SI is limited to the use of 100,000,000 cubic feet of natural gas on a 12 month rolling total basis.

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Total Annual Emissions for the Facility
(used to calculate the annual license fee)

<u>Pollutant</u>	<u>TPY</u>
PM	2.6
PM ₁₀	2.6
SO ₂	0.1
NO _x	5.0
CO	3.9
VOC	10.3
Single VOC HAP	1.0
Single PM HAP	9.9
Total VOC HAP	2.0
Total PM HAP	12.0

III. AIR QUALITY ANALYSIS

According to the Maine Regulations Chapter 115, the level of air quality analyses required for a non-major new source shall be determined on a case-by-case basis. Based on the information available in the file, and the similarity to existing sources, Maine Ambient Air Quality Standards (MAAQS) will not be violated by this source.

ORDER

Based on the above Findings and subject to conditions listed below the Department concludes that the emissions from this source:

- will receive Best Practical Treatment,
- will not violate applicable emission standards,
- will not violate applicable ambient air quality standards in conjunction with emissions from other sources.

The Department hereby grants Air Emission License A-643-71-G-R, subject to the following conditions :

- (1) Employees and authorized representatives of the Department shall be allowed access to the licensee's premises during business hours, or any time during which any emissions units are in operation, and at such other times as the Department deems necessary for the purpose of performing tests, collecting samples, conducting inspections, or examining and copying records relating to emissions (Title 38 MRSA §347-C).

- (2) The licensee shall acquire a new or amended air emission license prior to commencing construction of a modification, unless specifically provided for in Chapter 115.
- (3) Approval to construct shall become invalid if the source has not commenced construction within eighteen (18) months after receipt of such approval or if construction is discontinued for a period of eighteen (18) months or more. The Department may extend this time period upon a satisfactory showing that an extension is justified, but may condition such extension upon a review of either the control technology analysis or the ambient air quality standards analysis, or both.
- (4) The licensee shall establish and maintain a continuing program of best management practices for suppression of fugitive particulate matter during any period of construction, reconstruction, or operation which may result in fugitive dust, and shall submit a description of the program to the Department upon request.
- (5) The licensee shall pay the annual air emission license fee to the Department, calculated pursuant to Title 38 MRSA §353.
- (6) The license does not convey any property rights of any sort, or any exclusive privilege.
- (7) The licensee shall maintain and operate all emission units and air pollution control systems required by the air emission license in a manner consistent with good air pollution control practice for minimizing emissions.
- (8) The licensee shall maintain sufficient records, to accurately document compliance with emission standards and license conditions and shall maintain such records for a minimum of six (6) years. The records shall be submitted to the Department upon written request.
- (9) The licensee shall comply with all terms and conditions of the air emission license. The filing of an appeal by the licensee, the notification of planned changes or anticipated noncompliance by the licensee, or the filing of an application by the licensee for the renewal of a license or amendment shall not stay any condition of the license.
- (10) The licensee may not use as a defense in an enforcement action that the disruption, cessation, or reduction of licensed operations would have been necessary in order to maintain compliance with the conditions of the air emission license.

- (11) In accordance with the Department's air emission compliance test protocol and 40 CFR Part 60 or other method approved or required by the Department, the licensee shall:
- a. perform stack testing to demonstrate compliance with the applicable emission standards under circumstances representative of the facility's normal process and operating conditions:
 1. within sixty (60) calendar days of receipt of a notification to test from the Department or EPA, if visible emissions, equipment operating parameters, staff inspection, air monitoring or other cause indicate to the Department that equipment may be operating out of compliance with emission standards or license conditions; or
 2. pursuant to any other requirement of this license to perform stack testing.
 - b. install or make provisions to install test ports that meet the criteria of 40 CFR Part 60, Appendix A, and test platforms, if necessary, and other accommodations necessary to allow emission testing; and
 - c. submit a written report to the Department within thirty (30) days from date of test completion.
- (12) If the results of a stack test performed under circumstances representative of the facility's normal process and operating conditions indicate emissions in excess of the applicable standards, then:
- a. within thirty (30) days following receipt of such test results, the licensee shall re-test the non-complying emission source under circumstances representative of the facility's normal process and operating conditions and in accordance with the Department's air emission compliance test protocol and 40 CFR Part 60 or other method approved or required by the Department; and
 - b. the days of violation shall be presumed to include the date of stack test and each and every day of operation thereafter until compliance is demonstrated under normal and representative process and operating conditions, except to the extent that the facility can prove to the satisfaction of the Department that there were intervening days during which no violation occurred or that the violation was not continuing in nature; and
 - c. the licensee may, upon the approval of the Department following the successful demonstration of compliance at alternative load conditions, operate under such alternative load conditions on an interim basis prior to a demonstration of compliance under normal and representative process and operating conditions.

- (13) Notwithstanding any other provision in the State Implementation Plan approved by the EPA or Section 114(a) of the CAA, any credible evidence may be used for the purpose of establishing whether a person has violated or is in violation of any statute, regulation, or Part 70 license requirement.
- (14) The licensee shall maintain records of malfunctions, failures, downtime, and any other similar change in operation of air pollution control systems or the emissions unit itself that would affect emissions and that is not consistent with the terms and conditions of the air emission license. The licensee shall notify the Department within two (2) days or the next state working day, whichever is later, of such occasions where such changes result in an increase of emissions. The licensee shall report all excess emissions in the units of the applicable emission limitation.
- (15) Upon the written request of the Department, the licensee shall establish and maintain such records, make such reports, install, use, and maintain such monitoring equipment, sample such emissions (in accordance with such methods, at such locations, at such intervals, and in such manner as the Department shall prescribe), and provide other information as the Department may reasonably require to determine the licensee's compliance status.
- (16) SI shall fire natural gas as fuel in all fuel burning equipment.
- (17) SI is limited to the use of 100,000,000 cubic feet of natural gas facility wide on a 12 month rolling total basis, based on fuel use receipts. SI shall track natural gas usage on a monthly basis.
- (18) **Licensed fuel burning equipment emission limits:**
- A. Emissions from Furnace #3, #4, #5, #9, #18 and #19 each shall not exceed the following:

<u>Pollutant</u>	<u>lb/hr</u>
PM	0.10
PM ₁₀	0.10
SO ₂	0.01
NO _x	0.19
CO	0.15
VOC	0.01

B. Emissions from Furnace #6 shall not exceed the following:

<u>Pollutant</u>	<u>lb/hr</u>
PM	0.07
PM ₁₀	0.07
SO ₂	0.01
NO _x	0.14
CO	0.10
VOC	0.01

C. Emissions from Furnace #7 shall not exceed the following:

<u>Pollutant</u>	<u>lb/hr</u>
PM	0.13
PM ₁₀	0.13
SO ₂	0.01
NO _x	0.25
CO	0.19
VOC	0.01

D. Emissions from Boiler #8 shall not exceed the following:

<u>Pollutant</u>	<u>lb/hr</u>
PM	0.07
PM ₁₀	0.07
SO ₂	0.01
NO _x	0.13
CO	0.10
VOC	0.01

E. Emissions from the Air Makeup Unit shall not exceed the following:

<u>Pollutant</u>	<u>lb/MMBtu</u>	<u>lb/hr</u>
PM	0.05	0.15
PM ₁₀	n/a	0.15
SO ₂	n/a	0.01
NO _x	n/a	0.29
CO	n/a	0.22
VOC	n/a	0.02

F. Emissions from Furnace #11 shall not exceed the following:

<u>Pollutant</u>	<u>lb/hr</u>
PM	0.05
PM ₁₀	0.05
SO ₂	0.01
NO _x	0.10
CO	0.17
VOC	0.01

G. Emissions from Furnace #15, #16, and #17 each shall not exceed the following:

<u>Pollutant</u>	<u>lb/hr</u>
PM	0.10
PM ₁₀	0.10
SO ₂	0.01
NO _x	0.19
CO	0.15
VOC	0.01

H. Visible emissions from the stacks serving Furnace #3, #4, #5, #6, #7, Boiler #8, Furnace #9, Air Makeup Unit, Furnace #11, #15, #16, #17, #18, and #19 each shall not exceed an opacity of 10 percent on a six (6) minute block average basis, except for no more than one (1) six (6) minute block average in a 3-hour period.

- (19) SI shall operate the dust collection devices at all times when the corresponding process equipment is in use.
- (20) SI shall close the MEK Parts Washer when not in use to minimize fugitive VOC HAP emissions.
- (21) SI shall use high volume, low-pressure (HVLP) spray guns in the SermeTel Area.
- (22) SI shall not exceed the following VOC emission limits from all non-fuel burning emissions sources:

	<u>lb/month</u>	<u>TPY</u>
VOCs	1666	9.996

Compliance with the above VOC lb/month and ton per year limits shall be demonstrated by monthly mass balance calculations using the amount of material used and the VOC content of the material as found on the MSDS sheets. SI shall maintain monthly records on the premises to document the name and

identification of each coating and the mass of VOC per volume of each coating used on each coating unit, line or operation.

- (23) HAP emissions from SI shall not exceed:
- A. A facility wide limit of 1.0 ton per year of any one single VOC HAP (12 month rolling total)
 - B. A facility wide limit of 2.0 tons per year of total VOC HAPs (12 month rolling total)
 - C. A facility wide limit of 9.9 tons per year of any one single PM HAP (12 month rolling total)
 - D. A facility wide limit 12.0 tons per year of total PM HAPs (12 month rolling total)

The record keeping documenting the above limits for HAPs shall be based on MSDS or manufacturer information for the materials and controls used in conjunction with usage and hours of operation, if necessary.

- (24) SI shall notify the Department within 48 hours and submit a report to the Department on a quarterly basis if a malfunction or breakdown in any component causes a violation of any emission standard (Title 38 MRSA §605-C).
- (25) Biennial Emission Statement
In accordance with MEDEP Chapter 137, the licensee shall report September 1, every two years (2002, 2004, etc.) to the Department, the information necessary to accurately update the State's toxic air pollutants emission inventory by means of a written emission statement containing the information required in MEDEP Chapter 137.

Reports and questions on the Air Toxics emissions inventory portion should be directed to:

Attn: Toxics Inventory Coordinator
Maine DEP
Bureau of Air Quality
17 State House Station
Augusta, ME 04333-0017
Phone: (207) 287-2437

- (26) SI shall pay the annual air emission license fee within 30 days of **June 30th** of each year. Pursuant to 38 MRSA §353-A, failure to pay this annual fee in the stated timeframe is sufficient grounds for revocation of the license under 38 MRSA §341-D, subsection 3.

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(27) The term of this order shall be for five (5) years from the signature date below.

DONE AND DATED IN AUGUSTA, MAINE THIS DAY OF 2002.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: _____
MARTHA G. KIRKPATRICK, COMMISSIONER

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: April 11, 2002

Date of application acceptance: April 23, 2002

Date filed with the Board of Environmental Protection: _____

This Order prepared by Mark Roberts, Bureau of Air Quality.